

30. A method for performing an immunodiagnostic test for veterinary diseases in an organism comprising:

- a) immobilizing an antigen from an infectious agent associated with the veterinary disease, or an antibody specific for an antigen from said infectious agent, on a piezoelectric (Pz) crystal;
- b) measuring a resonant frequency of said crystal following step (a);
- c) contacting said crystal with a biological specimen from said organism to be tested, wherein said Pz crystal was previously used in a test which was negative for said infectious agent;
- d) measuring a resonant frequency of said crystal following step (c);
- e) comparing the resonant frequency measured in step (b) with the resonant frequency measured in step (d) wherein if the difference between the two frequencies is equal to or greater than a cut-off threshold value then said biological specimen is positive for the presence of said infectious agent.

31. The method of claim 30, wherein said antigen is a recombinant antigen.

32. The method of claim 30, wherein said infectious agent is a bacterium or a virus.

33. The method of claim 30, wherein following step (a) said crystal is contacted with a blocking reagent.

34. The method of claim 30, wherein said immobilizing is performed by dipping said Pz crystal into a solution of said antigen.

35. A method for performing an immunodiagnostic test for the presence in an organism of an infectious agent associated with *Salmonella enteritidis* (SE) or PRRSV disease, comprising:

- a) immobilizing a recombinant antigen from said infectious agent, or an antibody specific for an antigen from said infectious agent on a piezoelectric (Pz) crystal;
- b) measuring a resonant frequency of said crystal following step (a);
- c) contacting said crystal with a biological specimen from said organism to be tested;
- d) measuring a resonant frequency of said crystal following step (c);
- e) comparing the resonant frequency measured in step (b) with the resonant frequency measured in step (d) wherein if the difference between the two frequencies is equal to or greater than a cut-off threshold value then said biological specimen is positive for the presence of said infectious agent.

36. The method of claim 35, wherein following step (a) said crystal is contacted with a blocking reagent.

37. The method of claim 35, wherein said antigen is a transmembrane envelope protein.

38. The method of claim 37, wherein said transmembrane envelope protein is recombinantly produced as a fusion protein comprising glutathione S-transferase.

39. The method of claim 35, wherein said immobilizing is performed by dipping said Pz crystal into a solution of said antigen.

40. The method of claim 35, wherein said antigen comprises a peptide of SEQ ID NO:2.

- D*
41. The method of claim 35, wherein said antigen comprises ORF 5 of PRRSV.
 42. A diagnostic kit comprising a Pz crystal coated with a recombinant antigen from an infectious agent associated with *Salmonella enteritidis* (SE) or PRRSV disease.
-

2025 RELEASE UNDER E.O. 14176